Time	Monday, 21 October	Tueday, 22 October			Wednesday, 23 October			Thursday, 24 October			Friday, 25 October		
0700-0800		Registration											
		Open A	Open B	NATO/MOUT	Open A	Open B	NATO/MOUT	Open A	Open B	NATO	Open A	Open B	NATO
0800-0940		Opening Ceremony; Welcome, Singer Keynote			Blast,M&S,Load Response,Penetration	Protec-Mat Prop	MOUT Penetration	Shock/SR	Risk Mgmt	SHIELDS 1	SR-Columns/RC Col/ UHPC/Model Approach	Protec-Soil/Tool/ Overburden/Mun Storage	NATO-Localized,Protec, Risk Mgmt,Tool
0940-1000		Break			Break			Break			Break		
1000-1140		Blast 1	Protec-Blast	Overview	Penetration/Combined	Protec-Mat Prop 2	NATO-Blast	SR	Tool	SHIELDS 2	Closing Session + Adjourn		
1140-1300		Lunch			Lunch			Lunch					
1300-1440	Registration	Blast 2	Protec-Blast 2	MOUT-Blast	Load Buses for Tour 1300-1330			SR-M&S	Penetration	SHIELDS 3			
1440-1500		Break			Arrive at Tyndal 1430 Tour 1430-1630 Load buses to leave 1630-1700 arrive at hotel 1800			Break					
1500-1640		Blast 3	Protec-Blast 3	MOUT-M&S						NATO-Blast,Protec, Multi Det			
								Load Buses for Capt'n Anderson's Tour 1640					
1800-1930	Reception on St. Andrews Pavillion (Sunset cruise)				Banquet Dinner; Speaker TBD			Captain Andersons Tour 1700-2000					
1930-2100													

Monday, October 21, 2019			
13:00-16:30	Registration		
17:00-21:00	Reception on St. Andrews Pavilion		
Tuesday, October 22, 2019			
7:00-8:00	Registration		
8:00-9:40	Opening Ceremony, Singer Keynote		
9:40-10:00	Coffee Break		
Location	**Ballroom AB**	**Ballroom EF**	**Spanish Moss**
Session	**Blast 1**	**Protec-Blast**	**MOUT Overview**
10:00-10:20	**Pope, D.J.** Predicting Near-Field Specific Impulse Distributions using Machine Learning	**Jonet, Arnaud** Blast Mitigation Using Mineral Foam As Sacrificial Claddings	**Staubs, Ernest** Overview Of Joint Weapon Effects Research
10:20-10:40	**Gran, Jim** Effects Of Elevated Ambient Pressure On Explosive Blast In A Sealed Pipe	**Maazoun, Azer** New Technique To Protect Rc Slabs Against Explosions Using Cfrp As Externally Bonded Reinforcement	**Rohen, Karl** 3D Measurement (As Built Measurement) And Surface Model Of The Entire “Bunker Ladeburg” Complex
10:40-11:00	**Stewart, Joel** Explosively Driven Shock Tube Investigations	**Eytan, Reuben** Practical Experience In The Optimal Implementation Of :Invisible" Hardening Measures In Buildings	**Doerr, Andreas** Experimental Explosive Crater Analysis With Cast
11:00-11:20	**Trélat, Sophie** Reduced-Scale High Explosive Charges: A Joint Experimental Work To Study Free-Field Blast Effects	**Ichino, Hiroyoshi** An Experimental Study On Blast Mitigation Layers Composed Of Eps Plate And Soil	
11:20-11:40	**Chiarito, Vincent** Armored Designs For Reinforced Concrete Bridge Towers To Mitgate Close-In Detonations	**Blanc, Ludovic** Experimental And Numerical Investigation On Load Impulse Reduction With A Sandwich Add-On Armour	
11:40-13:00	**Lunch**		

Session	**Blast 2**	**Protec-Blast 2**	**MOUT- Blast**
13:00-13:20	**Edri, Idan E.** Equivalency Of Different Explosives In A Confined Space	**Consulting, Prostruct** Blast Resistance Of Reinforced Concrete And Masonry Elements Retrofitted Using A New Quick Application Glass Fibre Reinforced Polymer System	**Ohrt, Alan** Observed Casing Effects From A Heavily-Cased Explosive Cylinder
13:20-13:40	**Clutter, Keith** Strategy For Modeling Non-Ideal Explosives	**Chikhradze, Nikoloz** Reduction Of Blast Loads On The Human Body By A Water Barrier	**Bewick, Bryan** Response Of Adobe Structures Subjected To Internal Blast Loads
13:40-14:00	**Clutter, Keith** Near-Field Dynamics Affecting Loading From Ideal Explosives	**Chee, Min Hui** Reinforced Concrete Panels Retrofitted With Fibre Reinforced Polymers And Subjected To Near-Field Blast And Fragmentation Effects	**Davis, Roosevelt** Airblast Influences Of Doors In A Multi-Room Structure
14:00-14:20	**Peh, Teng Sheng** Urban Canyon Explosive Testing To Investigate Glazing Response And Blast Propagation	**Rebelo, Hugo** 3D Printed Pla Sacrificial Honeycomb Cladding Blast Mitigation	**Scarborough, Eric** Comparison Of Fast Running Simulations With Reguard To Blast
14:20-14:40	**Gan, Edward** Performance Characterisation And Further Development With Nfpbs' Advanced Blast Simulator	**Baum, Joseph** Blast Wave Attenuation Through A Cloud Of Droplets	**Froechtenicht, Maik** Validation Of Apollo Cfd-Code Using Small Scale Tests Of Internal Detonations
14:40-15:00	**Coffee Break**		
Session	**Blast 3**	**Protec-Blast 3**	**MOUT- M&S**
15:00-15:20	**Langran-Wheeler, Christian** Reflected Blast Loads From Long Cylinders In The Near-Field	**Mourão, Rodrigo** Experimental Assessment Of Concrete With Bonded Frp Under Contact Explosion	**Scarborough, Eric** A Comparison Of Simulating Multiple Fragment Impacts
15:20-15:40	**Clutter, Keith** Prediction Of Blast Pressure	**Dalenius, Rolf** The Influence Of Height Of	**Rohen, Karl** Precision 2D Assessment

	From Explosions With Aluminum Powder	Charge On Blast Loads Behind A Shielding Wall	System Of Fragment Holes In Witness Plates
15:40-16:00	**Wholey, Will** Cfd Investigation Of Blast Pressure Ingress And Interior Distribution In Structures Subjected To External Blast Loading And Development Of Improved Simplified Calculation Parameters For Assessment Of Blast Injury And Calculation Of Interior Structural Des	**Zircher, Tobias** Investigations On The Use Of Fibre Concrete For Infrastructure Protection	**Minkoff, Sarah** Modeling Complex Structural Environments Using Petra
16:00-16:20	**Bogosian, David** Experimentally-Derived Equivalent Explosive Weights For Non-Ideal Charges	**Pezzola, Genevieve** Prototype Testing Of The Expedient Retrofit For Existing Buildings (Ereb) System	**Froechtenicht, Maik** Calculating The Volume Changes Of A Detonation Room Using Paraview
16:20-16:40	**Knudsen, Vegeir** Air Shock Wave Propagation In A Tunnel With Blast Pockets	**Langdon, Genevieve** Influence Of Venting Configuration On The Deformation And Rupture Of A Scaled Aircraft Luggage Container Subjected To Internal Blast Loading	**Staubs, Ernest** Research Into Secondary Debris And Its Potentially Damaging Effects
Wednesday, October 23, 2019			
7:00-8:00	Registration		
Session	**Blast, M&S, Load Response, Penetration**	**Protec- Mat Prop**	**MOUT Penetration**
8:00-8:20	**Dalenius, Rolf** Diffraction Effects Of Blast Waves Around Corners	**Durant, Bradley** Determining The Effect Of Weak Horizontal Shear Planes On Composite Flexural Systems Subjected To Blast Loading Using Fundamental Structural Analysis	**Danielson, Kent** Deformable Fragment And Projectile Penetration Modeling With Resistance Functions
8:20-8:40	**Klomfass, Arno** A Universal Co-Simulation Interface For Blast-Loading Of	**Esquilin-Mangual, Omar** Experimental Evaluation Of The Impulse Reduction By Plywood	**Greulich, Stefan** Recent Developments In Penetration Methodologies –

	Structures	And Insulated Foam Panels As Triggering Materials And Implementation On A Fast-Running Tool	An Update
8:40-9:00	**Astarlioglu, Serdar** Influence Of Load Waveform On Pressure-Impulse Diagrams Of Normal And High-Strength Concrete Panels	**Pascoe, Luke** Effect Of Adhesion Level On The Post-Fracture Response Of Laminated Glazing Systems Subjected To Blast Loads	**Sauer, Christoph** Modelling The Penetration Into Uhpc And Frc – Force Law Development Based On Hydrocode Simulations
9:00-9:20	**Vankirk, George** Application Of Residual Strength Study To Improve Concrete Damage Quantification	**Li Piani, Tiziano** Dynamic Increase Factors For Adobe: Predicting The Dynamic Strength In Compression For Earthen Materials	**Rossberg, Daniel** More Joint Effect Testing For Shoulder-Fired Weapons Against Infrastructure Targets
9:20-9:40		**Chee, Min Hui** Blast Effects On Pavement Sections	**Bailey, Keri** Us/Ge Joint Penetration Experiments Against Advanced Strength Concretes
9:40-10:00	**Coffee Break**		
Session	**Penetration/Combined**	**Protec-Mat prop 2**	**NATO-Blast**
10:00-10:20	**Barnes, Andrew** Modeling Combined Weapon Airblast And Fragment Loading From Detonation To Structure Interaction	**Pereira, Luis** A Numerical Study Of Ballistic Impacts On Normal And High-Performance Concrete	**Vorgert, Sarah** Experiments Investigating External Venting Of Internal Detonations In A Small Scale Structure
10:20-10:40	**Rouquand, Alain** A Methodology To Simulate Combined Blast And Fragment Effects On Reinforced Concrete Structures	**Elbaz, Ohad** Design Of A Confined Split Hopkinson Pressure Bar For Measurements Of Granular Soils	**Vorgert, Sarah** Pressure Ratio Analysis Of External Venting In A Small Scale Structure
10:40-11:00	**Agrawal, Ankit** Combining Effects Of Air-Blast, Fragments, And Fire	**Magallanes, Joe** High Strain-Rate Behaviors And Modeling Of Structural Steels For Protective Structures	**Vorgert, Sarah** Experimental Investigation Of Simultaneous Versus Independent Detonations Of Distributed Explosive Charges

11:00-11:20	**Soto, Orlando** Numerical Modeling Of Fragment And Blast Loaded Concrete Structures Using Massively-Parallel Coupled Cfd-Csd Techniques	**Stephens, Catherine** Effects Of Masonry-Mortar Bond Strength On The Blast Load Response Of Masonry Walls	**Pearson, Alan** Blast In A Multi-Room Structure
11:20-11:40	**Lawrimore, William** Option Study On Concrete Penetration Simulations Using Ale3D		**Petrovitch, Christopher** Blast Propagation Through Rapidly Breached Rc Walls
11:40-13:00	Lunch		
13:00-18:00	Load Buses for Tour- Leave at 13:30 Tyndall Tour- 14:30-16:30 Load Buses to Leave- 16:30-17:00 Arrive at Hotel- 18:00		
18:00-21:00	Banquet Dinner		
Thursday, October 24, 2019			
7:00-8:00	Registration		
Session	**Shock/SR**	**Risk Mgmt**	**SHIELDS 1**
8:00-8:20	**Stone, Michael** An Energy Flow Approach For Assessing Nsc And Uhpc Cylinders Under Static And Impact Loads	**Bermbach, Tim** The Contribution Of Research Products To The Command And Control Process Regarding Structural Protection In Deployed Operations	**Knutson, Tor And Foi/Fmv** Shield Management Summary/ Shield Test Execution Summary
8:20-8:40	**Edri, Idan E.** Dynamic Response Characteristics Of Arching Masonry Walls Under Blast Loading	**Ornai, David** Protective Cable Net Structure Against Drones And Munitions *** Has The Abstract Been Correceted? ***	**CHE** Che Passive Modular Protection System For Peace Support Missions Exposed To Very Large Air Blast
8:40-9:00	**Schmitt, Daniel** Investigations On Soil Filled Perimeter Walls Under Blast Loading	**Johnsson, Fredrik** Explosive Remnants – A Multifaceted Risk Problem	**CHE** Whole-Body Displacement Due To Blast Loads
9:00-9:20		**Ingier, Petter Toensberg** Stacked Fragmenting Casings	**CHE** Behaviour Of Swiss Brick Walls Subjected To Blast Loads

9:20-9:40		**Huber, Daniel** Structural Analysis Of Buildings After Ied-Attacks Deployed By Uavs – A Comparison Of Numerical And Analytical Simulation Methods	**DEU** Effect Of A Heavy Improvised Explosive Loading On Blast Protection Walls
9:40-10:00	**Break**		
Session	**SR**	**Tool**	**SHIELD 2**
10:00-10:20	**Gebbeken, Norbert** Explosions Against Full Scale Conventional And Hardened Houses Made Of Masonry, Reinforced Concrete And Steel	**Susi, Bryan** Scalable Fidelity Cfd Simulations For Decision Support Applications	**DEU** Effect Of A Super Heavy Improvised Explosive Loading On Wall Systems And Accommodation
10:20-10:40	**Fischer, Kai** Dynamic Bearing Capacity Of Reinforced Concrete Plates Subjected To Blast Loading,	**Brewer, Tim** Employment Of The Open-Source Airblast Solver (Blastfoam) To Support The Super Heavy Improvised Explosive Loading Demonstration (Shield) Test Program	**DEU** Effect Of A Super Heavy Improvised Explosive Loading On Reinforced Concrete Emplacements
10:40-11:00	**Puryear, John** Validation Of A Cold-Formed Steel Stud Wall Finite Element Model Against Blast Test Measurements	**Tu, Huan** Damage Prediction Tool Based On Artificial Neural Network Technique For Reinforced Concrete Walls Strengthened With Carbon Fiber Reinforced Polymer Layers Under Close-In Blast Effect	**SWE** Blast Resistance From A Vlvbied In Different Façade Elements
11:00-11:20	**Hadjioannou, Michalis** Full Scale Blast Tests Of A Three-Story Steel Frame Building With Hardened Curtainwall Façade	**Sherrill, Judith** Integrated Weapons Environment For Analysis (Iwea): Pioneering Synergistic Effects	**SWE** Throw Of People - Basic Study And Dummy Evaluation

11:20-11:40			**SWE** Rough Fpe - Solutions Of Containers, Gabions And Filling
11:40-13:00	Lunch		
Session	**SR-M&S**	**Penetration**	**SHIELDS 3**
13:00-13:20	**Caçoilo, Andreia** Pressure-Impulse Blast Response Of Steel Iso Containers	**Atoui, Oussama** Numerical Investigation Of High Strength Aluminum Alloy Subjected To High Velocity Impact By A Rigid Spherical Projectile	**NOR** Cloudberry: Laminated Glass Panes Exposed To Blast Load
13:20-13:40	**Rakvåg, Knut** Reaction Forces Of Dynamically Loaded Beams	**Beppu, Masuhiro** A Study On Perforation Failure Of Steel Plates Subjected To Impact	**NOR** Shield: Summary Of Nor Tests Objects On Nskusta
13:40-14:00	**Luna, Arturo** Determining The Effect Of Weak Horizontal Shear Planes On Composite Flexural Systems Subjected To Blast Loading Using Fundamental Structural Analysis	**Remennikov, Alex** An Experimental Investigation Of The Penetration Of Multiple Spaced Hybrid Panels By Explosively Formed Projectiles	**USA** Reflected Pressures On A Barrier Wall
14:00-14:20	**Weaver, Mark** Modeling The Residual Capacity Of Blast-Damaged Reinforced Concrete Columns	**Remennikov, Alex** The Simulation Of Aluminum-Ldpe Barriers For Protection Against Explosively Formed Projectiles	**USA** Shield Free-Field Overpressure Measurements
14:20-14:40			**USA** Comparison Of Measured Nskusta Pressures On Shield To Small-Scale Results
14:40-15:00	Break		
Session	**TBD**	**TBD**	**NATO- Blast, Protec, Multi Det**

15:00-15:20	**Swanson, Mark** TBD		**Rios-Estremera, Daniel** Evaluation Of Scaled Range Dependency Of The Tnt Equivalence For Anfo
15:20-15:40	**Kewaisy, Tarek** Advanced Modeling of High-Velocity Normal Impact of Rigid Projectiles on Reinforced Concrete Slabs		**Stephens, Catherine** Effects Of Charge Shape On Blast Loading And An Empirical Model
15:40-16:00	**Frank, Scott** Software Tool To Predict Injuries From Debris Resulting From Structural Failure		**Gomes, Gabriel** Blast Energy-Absorption Connectors In Protection Of Infrastructures
16:00-16:20	**Oswald, Chuck** Fast Running Model to Predict Debris from Global Failure of Reinforced Concrete and Masonry Components		**Davis, Roosevelt** Multiple Charge Experiments Against A Surrogate Steel Door In A One Room Structure
16:20-16:40			**Bogosian, David** Predictive Metrics For Response Of A Hardened Steel Door To
16:40-20:00	Load buses for Capt'n Anderson's Tour- 16:40 Tour- 17:00-20:00		
Friday, October 25, 2019			
7:00-8:00	Breakfast		
Session	**SR-Columns/RCCol/UHPC /Model Approach**	**Protec-Soil/Tool/Overburden/Mun storage**	**NATO-Localized, Protec, Risk Mgmt, Tool**
8:00-8:20	**Krauthammer, Theodor** An Energy Flow Based Approach For Structural Response Assessment	**Dupont, Vincent** Design And Optimization Of Operational Munition Storage	**Bogosian, David** Consequences Of Applying Objective Methods For Selecting Peak Pressure From Experimental Data
8:20-8:40	**Braimah, Abass** Influence Of Axial Load Ratio On The Response Of Rc Columns Subjected To Contact	**Williams, Neil** Numerical Simulations To Evaluate Effects Of Earth Cover On An Ecm	**Huntley, Shelley** Blast Testing Of Modified Shipping Containers Intended For Use As Screening Facilities

	Explosion Effects		
8:40-9:00	**Stone, Michael** Normal Strength Concrete And Ultra-High-Performance Concrete Beams Under Impact	**Durant, Bradley** Determining The Effect Of Soil Cover On The Dynamic Response Of A Concrete Roof Slab Subjected To Blast Loading Using High-Fidelity Simulation	**Zohrabyan, Vahan** The Residual Load Bearing Capacity Of Reinforced Concrete As Well As Steel Fiber Reinforced Concrete Components After Contact Detonation
9:00-9:20	**Krauthammer, Theodor** Considerations Of Longitudinal And Shear Reinforcements For Uhpfrc Beams	**Payne, Joshua** Evaluation Of Effect Of Earth-Cover Thickness On Ecm Loading: Phase 1 Results	**Roller, Christoph** Ballistic Performance Of Various Steel Materials At Elevated And Reduced Temperature
9:20-9:40	**Arlery, Magali** Multiscale Experiments And Simulations For Progressive Collapse Risk Assessment	**Von Ramin, Malte** Rafob-Ram, A Risk Analysis Software Tool For Forward Operating Bases	**Sielicki, Piotr** Experimental Study Of Flying Debris Accelerated By Explosive
9:40-10:00			**Wathugala, Gamage Wije** Fast Running Model To Predict Secondary Debris Due To Buried Explosives
10:00-10:20			**Sibeaud, Jean-Marc** Model Scale Experiments Of Concrete Slabs Penetration At Supersonic Impact Velocity And Code Validation
9:40-10:20	**Break**		
10:20-11:20	**Closing Session**		